Discharge Capacities, Nathan DV-5, 6 and 7 Mechanical Lubricator.

Instruction Sheet No. 1027-C shows capacities of Nathan type D.V. pumping units tested in a DV-5 lubricator at a ratchet shaft speed of 14 R.P.M.. From this curve pints per mile and inversely miles per pint may be determined when the diameter of driving wheel and ratchet angle is known. For example, a 70" driving wheel makes 288 revolutions per mile. A ratchet angle of 26° would require approximately 14 revolutions of the drivers for 1 revolution of the ratchet shaft. The ratchet shaft would then make $\frac{288}{14}$ or 20.6 revolutions per mile.

Based on above conditions and sheet 1027-C, the following table has been prepared, cubic centimeters have been converted into pints. These figures are based on new units.

To obtain the number of miles per pint for other conditions, it is only necessary to find the number of revolutions per mile of the ratchet shaft. The table is based on 20.6 revolutions per mile. Conditions for other ratchet angles may therefore be obtained by simple proportioning.

No. of Turns Open	Pints per Mile	Miles per Pint	No. of Turns Open	Pints per Mile	Miles per Pint
1/2	.00095	1052	5	.0095	105
1	.0019	526	5½	.01045	96
1½	.00285	352	6	.0114	88
2	.0038	264	6½	.01235	81
2½	.00475	211	7	.0133	75
3	.0057	176	7½	.01425	70
3½	.00665	151	8	.0152	66
4	.0076	132	8¼	.0157	63.7
4½	.00855	117			

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